

What is claimed is:

1. A spatial light modulator which comprises:
support substrate that has an electrode layer; and
movable thin film that has at least an electrode
5 layer, and that is opposingly placed above said support
substrate with being separated by a predetermined gap
distance in a manner that said movable thin film is
flexurally deformable toward said support substrate, and
in which a predetermined driving voltage is applied
10 between said electrode layer of said support substrate and
said electrode layer of said movable thin film to cause
said movable thin film to be deflected toward said support
substrate by an electrostatic force acting between said
electrode layers, whereby optical characteristics of said
15 device with respect to incident light are changed to
perform light modulation on the incident light,

wherein a returning electrode is disposed on a side
of said movable thin film, said side being opposite to
said support substrate, said returning electrode applying
20 an electrostatic force of attracting said movable thin
film when a driving voltage is applied.

2. A spatial light modulator according to claim 1,
wherein a spacer which prevents said movable thin film
25 from being flexurally deformed toward said returning

electrode is disposed between said movable thin film and said returning electrode.

3. A spatial light modulator according to claim 1,
5 wherein a change of the optical characteristics is a change of total reflection conditions due to a change of a refractive index of an interface between said movable thin film and said support substrate, the refractive index change being caused by making said movable thin film
10 contact with said support substrate.

4. A spatial light modulator according to claim 2,
wherein a change of the optical characteristics is a change of total reflection conditions due to a change of a
15 refractive index of an interface between said movable thin film and said support substrate, the refractive index change being caused by making said movable thin film contact with said support substrate.

20 5. A spatial light modulator according to claim 3, wherein said electrode layer of said support substrate, said electrode layer of said movable thin film, and said returning electrode are optically transparent.

25 6. A spatial light modulator according to claim 4,

wherein said electrode layer of said support substrate,
said electrode layer of said movable thin film, and said
returning electrode are optically transparent.

5 7. A spatial light modulator according to claim 1,
wherein

a multilayer reflective film is disposed on each of
opposed sides of said movable thin film and said support
substrate, and

10 the optical characteristics are optical interference
characteristics according to the gap distance between said
movable thin film and said support substrate, and a
wavelength of the incident light.

15 8. A spatial light modulator according to claim 2,
wherein

a multilayer reflective film is disposed on each of
opposed sides of said movable thin film and said support
substrate, and

20 the optical characteristics are optical interference
characteristics according to the gap distance between said
movable thin film and said support substrate, and a
wavelength of the incident light.

25 9. A spatial light modulator array wherein plural

spatial light modulators according to claim 1 are arranged one- or two-dimensionally.

10. An image forming device comprising:

- 5 a light source;
- a spatial light modulator array according to claim 9;
- an illumination optical system which illuminates said spatial light modulator array with light from said light source; and
- 10 a projection optical system which projects light emitted from said spatial light modulator array onto an image forming face.

11. A flat panel display comprising:

- 15 a light source which emits ultraviolet rays;
- a spatial light modulator array according to claim 9;
- an illumination optical system which illuminates said spatial light modulator array with light from said light source; and
- 20 a fluorescent member which is excited by light emitted from said spatial light modulator array to emit light.